

3.6 Visual Resources

This section evaluates visual resources in the project area, including the area of Whatcom County through which the 115 kV transmission lines would travel. The methodology used to assess scenic resources and impacts generally conforms to the Visual Management System (VMS) developed by the U.S. Forest Service (USFS).

3.6.1 Sources of Information

Topography, vegetation (size and shape), and developed land uses were reviewed using U.S. Geological Survey (USGS) quadrangle and project maps. Field reconnaissance was conducted to determine the general visibility of the project facilities from the identified sensitive viewpoints (e.g., residences, travel routes, parks, and public areas). Visual impacts were assessed based on the visibility of changes from sensitive viewpoints as a result of construction and operation of S2GF. Levels of visual impact were documented as low, moderate, or high.

3.6.2 Evaluation Methodology

Visual quality is described as the visual patterns created by the combination of rural character landscapes and industrial and man-made features. Visual quality was evaluated using the following descriptions:

- **Urban/Industrial** – The landscape is common to urban areas and urban/industrial fringes. Human elements are prevalent or landscape modifications exist, which do not compatibly blend with the natural surroundings (low visual intactness and unity).
- **Rural** – The landscape exhibits reasonably attractive natural and human-made features/patterns, although they are not visually distinctive or unusual within the region. The landscape integrity of the area provides some positive visual experiences such as the presence of natural open space peppered with existing agricultural areas (farm fields, etc.), or well-maintained, landscaped urban areas.
- **Unique/Distinctive** – The landscape exhibits distinctive and memorable visual features (landform, rock outcrops, etc.) and patterns (vegetation/open space) that are largely undisturbed—usually a rural or open space setting. Few, if any, man-made developments are present.

Viewer sensitivity is dependent on viewer types, exposure (number of viewers and view frequency), view orientation, view duration, and viewer awareness/sensitivity to visual changes. Levels of viewer sensitivity were evaluated using the following criteria:

- **Low** - Viewer types deemed to have low visual sensitivity include agricultural and industrial/warehouse workers. Compared with other viewer types, the number of

viewers is generally considered small and the duration of view is short. Viewer activities typically limit awareness/sensitivity to the visual setting immediately outside the workplace. Landscaping or adjacent buildings may screen views.

- **Moderate** - Viewer types deemed to have moderate visual sensitivity include highway and local travelers. The number of viewers varies depending on location, but tends to be relatively large based on overall densities of surrounding areas and the resulting volume of highway commuters. Viewer awareness/sensitivity is also considered moderate because destination travelers often have a focused orientation.
- **High** – Residential and recreational viewers, as well as viewers congregating in public gathering places (churches, schools, etc.), are considered to have comparatively high visual sensitivity. The visual setting may in part contribute to specific building orientation or the enjoyment of the experience. Views may be of long duration and high frequency. In some cases, views may contribute to property value.

For the major project components, a visual impact rating was assigned based upon distance from the viewer and viewer sensitivity. These are discussed in Section 3.6.4.

3.6.3 Existing Conditions

3.6.3.1 Landscape Setting

The project site is located in the Sumas River Valley directly south of the U.S./Canadian border in north-central Whatcom County. Agriculture and industrial activity mostly determine the human-made visual character in the immediate project area. The valley, predominantly flat, is bounded to the east by mountain ranges rising 1,000 feet above the valley floor. Depending on the time of year, some fields support crops and other fields lie fallow. The textures covering the hillside, largely mixtures of evergreen and deciduous trees, contrast with the rural patterns of farm fields, riparian ribbons, and rural developed areas. Vertical elements are present with riparian trees and shrubs growing along Johnson and Sumas Creeks, which meander in the vicinity of the site.

3.6.3.2 Visual Quality

The S2GF would be located in an industrially-zoned area characterized by light industrial/warehouse development. Socco Forest Products and SCCLP lie directly south of the project site across Halverstick Road (State Route 9). The existing SCCLP facility consists of several large buildings and a water tower that can be seen for miles in the valley. IKO Pacific, Inc., a roofing materials manufacturing facility, is located west of the project site. To the east of the project site, adjacent to Bob Mitchell Avenue, are Desticon Transportation, Inc., and Wood Stone light manufacturing and storage facilities. A City of Sumas powerline, supported by single wood pole structures, passes 100 feet

south of the S2GF site along the south side of Halverstick Road. These tall vertical elements (i.e., facilities and transmission poles) can be seen throughout the valley.

Overall, visual quality of the regional landscape setting is classified as rural in character. The natural and agricultural landscape features and patterns are reasonably attractive and interesting, but are not visually distinctive or unusual within the region. Visual integrity is moderate because the site would be located in a transition area between a rural setting and the City of Sumas. Some activities like agriculture have modified the landscape, but are visually compatible, or even complementary, to the native colors and textures of the area. Other landscape modifications, such as the presence of nearby industry, warehouse, and cogeneration facilities, are associated with development in the industrial fringe of Sumas.

Visual unity in the area is generally low. Landscape alterations like roads and powerlines are not particularly well integrated with undisturbed conditions. For example, travelers along Halverstick Road (State Route 9) view agricultural buildings and equipment, commercial signs and structures, light industrial warehouses, utility lines, railroad corridors, and roadside vegetation. Additionally, limited vegetation screening exists around industrial development with the exception of Socco Forest Products and the existing SCCLP facility, which are screened from Halverstick Road.

The project site itself is located on industrially zoned agricultural land that abuts other vacant parcels along Bob Mitchell Avenue and Halverstick Road. Currently, the site is covered with low grasses and wetland vegetation. The northern boundary of the site south of the Burlington Northern Railroad is bordered by conifers and mixed deciduous trees. No large shrubs, trees, or buildings are located on the project site. Like the landscape setting, visual quality of the project site is classified as urban/industrial. The site is topographically featureless and non-distinctive. Depending on the season, colors and vegetation patterns are determined by agricultural activities, but visual unity with the surroundings is moderate.

Pipeline Routes

Water service to the S2GF site extends east from the May Road well field and the municipal well field. Most of the water pipeline routes follow a series of existing utility and highway corridors. Overall, the landscape setting of the water pipeline route can be characterized as semi-rural to fringe industrial. From the S2GF site, the proposed sewer easement travels northeast along Bob Mitchell Avenue and continues east along Second Street through a general business area. The line crosses the Burlington Northern Railroad ROW at Railroad Street and then traverses east two blocks until it reaches Sumas Avenue. The line travels north along Sumas Avenue through a residential area for two blocks, turns east along Jones Road, then immediately turns north along Fisk Street until it reaches the U.S./Canadian border. The City of Abbotsford accepts sewage from this point.

Visual quality along the proposed route is similar to that described above (i.e., urban/industrial). The views when approaching the business and residential areas of downtown Sumas are not particularly distinctive. The landscape exhibits low to moderate intactness and unity due to transition from the rural/industrial areas to the general business district, and finally to high-density residential area.

An existing buried natural gas pipeline delivers gas to the SCCLP site approximately 0.25 miles south of the S2GF project site. SE2 plans to use the existing pipeline ROW to construct its own natural gas pipeline. Natural gas for the S2GF would originate in Canada and will be delivered via the Westcoast Energy, Inc., pipeline system to the Canadian border, crossing approximately one mile east of Sumas. A new parallel 16-inch gas line would be installed in the existing ROW to serve the S2GF. Provisions for an expansion of this type were made in the design and permitting of the original ROW. All but 2,175 feet of the natural gas supply line easement already exists through approximately 4 miles of agricultural land from the site to the U.S./Canadian border. The balance of the gas line easement is through industrial land operated by SCCLP. The new pipeline would extend beyond the adjacent SCCLP site to the S2GF project site.

Visual quality along the proposed gas pipeline is classified as rural. The landscape approaching the agricultural and industrial areas of Sumas is not particularly distinctive, and exhibits low to moderate intactness and unity due to transition of the agricultural lands to a rural/industrial setting.

Electrical Transmission Routes

230 kV U.S./Canadian Transmission Line Route

Power would be carried on transmission lines north toward the U.S./Canadian border following a series of existing utility and railroad ROWs. The landscape setting of this transmission line route is semi-rural to fringe industrial. The route from the plant site proceeds east to the northwestern side of Bob Mitchell Avenue, crossing the Burlington Northern (BN) spur line, using City of Sumas ROWs and an easement from the Railroad Depot owners located away from the road and on the edge of a bio-swale within the property. Before Bob Mitchell Avenue reaches Sumas Creek, the transmission line would cross to the southeastern side of the street. This would allow the transmission line to move onto a cleared piece of City-owned property and away from a habitat mitigation area on the western side of Bob Mitchell Avenue. From the southern corner of the West Garfield Street/Bob Mitchell Avenue intersection (City-owned property), the transmission route would proceed north to the southeastern side of the centerline of the BN railroad ROW. Then the transmission line would proceed north to the Canadian border along the cleared, industrial railroad switching area, keeping to the west of the tracks and the access road. At the Canadian border the BN ROW meets the Canadian Pacific (CP) ROW.

Visual quality along the proposed transmission line route is classified as rural. The landscape leaving the project site and continuing along the corridor to the U.S./Canadian border is not particularly distinctive and generally travels within a rural/industrial setting.

Whatcom County 115 kV Transmission Line Routes

Both line routings use the easements of existing roadways or utility line corridors (e.g., electrical or television) for more than 90 percent of each route. For those portions where there are existing lines, taller poles would be erected where aerial utility lines already exist to hold the new and existing lines. Single pole wood structures would be used throughout each route and are expected to be approximately 75 feet tall, which is almost double the height of many existing poles. The average interval between poles would be about 350 feet, but this may vary where features such as wetlands must be avoided, requiring alternative spacing.

The overall visual setting of both Whatcom County transmission route corridors is rural, with landscape that is not especially distinctive. A blend of agricultural land, forest, rural residences, and rural businesses characterize the landscape.

Viewer types along the corridors include local residents, local and business travelers, and agricultural workers. Recreational viewers are primarily limited to users of the Nooksack River, with minor exceptions.

The S2GF/Custer route is relatively flat along its length. The western third of the corridor from Custer Substation to Delta Line Road at W. Badger Road is located in an area with pastures, croplands, rural residences, and numerous scattered and isolated forest tracts that often conceal rural residences. The scattered forested areas act to shield structures, such as transmission lines, from distant views. East of this area, the corridor opens to mostly flat agricultural lands where line of sight in some areas can extend for several miles.

The southern third of the S2GF/Bellingham route, from the Bellingham Substation to the intersection of Everson Goshen and Central Roads, passes through flat to hilly topography. The landscape contains scattered forested areas (some extensive), pastures, and rural residences. Transmission lines and poles would at least partially blend into the landscape. North of this area the land is largely flatter cropland and pasture for dairy cattle, though rural residences are scattered throughout. Forested land is more restricted and primarily found along some of the watercourses or in a few isolated moraine areas. Approximately 2.5 miles southeast of Lynden, the corridor crosses the Nooksack River. The open water crossing is about 325 feet long. The river bends westward approximately 1,200 feet downstream of the crossing and bends to the east about 1,500 feet upstream. As a result, boaters would be able to view the transmission line crossing in an area of river about one-half mile long.

3.6.3.3 Viewer Types and Sensitivity

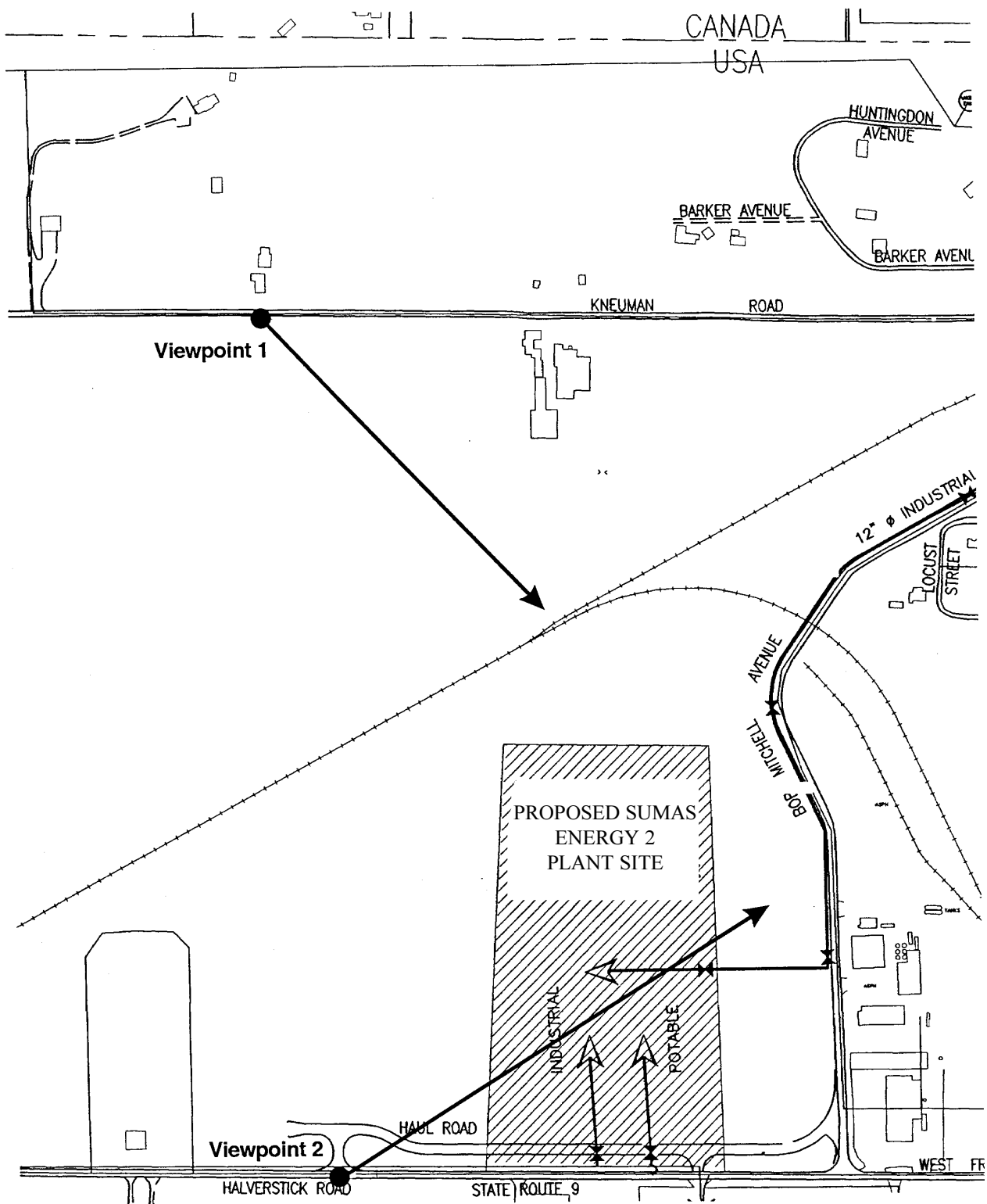
Primary viewer types in the S2GF vicinity include residents, local or business travelers, agricultural workers, and industrial/warehouse workers. Figure 3.6-1 identifies two key viewpoints of the project site.

The closest and most visually sensitive residential viewers of the S2GF are those living on Moe's Hill above Kneuman Road and residents living in homes located directly along Kneuman Road. Moe's Hill forms the area between Kneuman Road and the U.S./Canadian border. This low-density residential area is located approximately 1,400 feet north of the S2GF site property line. From homes in this area, viewpoints look southwest toward the S2GF site. Intervening trees would screen some of the S2GF elements, and some screening would be provided by new evergreen, spruce, fir, hemlock, and juniper, as well as deciduous species such as lombardy poplar, red alder, birch, bigleaf maple, and black cottonwoods that will be planted along the S2GF site boundaries. However, the emission stacks and steam from cooling towers would protrude above the tree line, making project facilities the dominant features of the view. Overall visual sensitivity for elevated residential viewers is high due to the close viewing distance and elevated viewpoint. Figure 3.6-2 – Existing View From Viewpoint 1 is from Kneuman Road.

Views from nearby residences along Halverstick Road (Jagers Dairy), Kneuman Road (Sytsma Dairy), and Locust and Pine Streets (east of Bob Mitchell Avenue) currently view existing riparian vegetation, trees, and the general openness of the site, which lacks planted vegetation screening. Existing industrial development in the area may block some views of the facilities, but prominent project features such as emission stacks, cooling tower steam, and transmission poles would be quite visible. Visual sensitivity of residents along these local travel corridors near the site is therefore rated high.

Trees growing along Johnson Creek, and the edges of agricultural fields would typically mitigate views of S2GF facilities from non-elevated residential viewers throughout the Nooksack Valley. However, the emission stacks may be seen protruding above the treeline and would be silhouetted against the sky. Visual sensitivity for these residential viewers would be moderate.

Potential highway viewers include travelers using State Route 9 (Halverstick Road), as depicted in Figure 3.6-3. Bob Mitchell Avenue, Kneuman Road, and Barbo Road, primarily serving local residents, are also located near the project site. State Route 9 is a primary local travel route into Sumas. Traveling east along State Route 9 near the S2GF site, viewers see industrial and commercial facilities (Valley Plumbing and Electric, and IKO Pacific, Inc.) and open fields surrounded by farmlands, trees, and riparian vegetation growing along Sumas Creek. The highway is not directly oriented towards the site, so views towards the site would be sideward glances. At the closest point, State Route 9 passes within approximately 300 feet of the facility. Based upon the viewer type, local traffic volume, highway orientation, and viewing range, visual sensitivity for travelers along State Route 9 is considered to be high.



EFSEC/Sumas
03/04/00

Source: Dames & Moore

Figure 3.6-1
Key Viewpoints of Power Plant Site

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Source: Fred Glick & Associates.

Source: Provided by Dames & Moore 3/1/00

Figure 3.6-2
Existing View From Viewpoint 1



Source: Fred Glick & Associates.

Source: Dames & Moore 3/1/00

Figure 3.6-3
Existing View From Viewpoint 2

Views for westbound travelers leaving Sumas along State Route 9 would be partially blocked by industrial facilities along Bob Mitchell Avenue. Once past Bob Mitchell Avenue, view duration would only be for a few seconds, and views may only be of cooling towers, emission stacks, and the electrical switchyard protruding above the treeline. Viewer sensitivity is, therefore, considered to be moderate.

The highest concentration of nearby industrial/warehouse workers would be at IKO Pacific, Inc. The distance between this facility and the S2GF is approximately 800 feet. Topography in the area is flat, and the fields between these workplaces and the S2GF are covered with grass and wetland vegetation. A few large trees grow on the northern periphery of the fields, but these trees do not provide appreciable screening from the majority of the IKO Pacific property. Visual sensitivity is considered low, however, because observers in the area would be focused on work activities and would thus have a limited awareness of peripheral visual conditions. For the same reasons, the visual sensitivity of other industrial and agricultural workers in the area is considered to be low.

Viewer sensitivity along the 230 kV U.S./Canadian transmission line route is considered low to moderate, with the exception of the elevated properties to the west of the route which are considered to have high sensitivity. The incidents of viewing by area residents, local or business travelers, and workers while moving through the area would be of short duration and partially screened by trees and buildings along the route. Also, viewer attention would be diverted from the lines by other activities and elements making up the rural/urban/industrial visual character of this portion of the City of Sumas through which the route passes.

Viewer sensitivity along the Whatcom County 115 kV transmission line routes ranges from low to high. High sensitivity is associated with lines and structures that would be in close proximity to residences, and instances of this are scattered throughout the route. Sensitivity would be lower in areas with restricted line-of-sight views, while areas with unrestricted line-of-sight views or contrasting landscape are considered of moderate sensitivity.

The proposed crossing of the Nooksack River along the S2GF/Bellingham route would have moderate to high sensitivity for boaters and other recreationists along this stretch of the river. Figure 3.6-4 provides an existing view of the proposed transmission line crossing of the Nooksack River.

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Source: Dames & Moore
3/1/00

Figure 3.6-4
Existing Viewpoint of Nooksack River Crossing

3.6.4 Environmental Impacts of Proposed Action

The relative level of potential visual impacts of the project elements was identified and evaluated based on a combination of visual quality and viewer sensitivity. These impact levels are presented in Table 3.6-1.

**Table 3.6-1: Visual Impact Ratings for S2GF Project Components
Based on Distance and Viewer Sensitivity**

Project Component	Visual Impact Rating*	
	With High Viewer Sensitivity	With Moderate Viewer Sensitivity
Distance: 0 – 0.5 Miles		
S2GF	H	M
Transmission Lines	H/M	M
Pipelines	M	M/L
Distance: 0.5 – 3 Miles		
S2GF	H/M	M/L
Transmission Lines	M	L
Pipelines	M/L	L
Distance: 3 Miles or Greater		
S2GF	M	L
Transmission Lines	M/L	L
Pipelines	L	L
* Visual impact ratings are H = High, M = Moderate, L = Low		

3.6.4.1 Construction

S2GF Site

During construction of the S2GF, viewers would observe site grading and related construction activities, which would include the stripping of grass and other vegetation. Approximately 30 trucks per hour would enter the site to bring fill from one of three nearby fill pits. A portion of the site, visible from Route 9, would be used for construction parking and material laydown. The impacts would last for the duration of construction, estimated to be between 15 and 18 months.

In general, visual impacts to the overall landscape setting resulting from construction of the S2GF are considered to be low to moderate, although not significant. The size of the site is relatively small compared to existing and on-going land disturbances created by activities such as agriculture and other industrial development. Construction activities would be similar in appearance to the construction of the adjacent SCCLP facility. Viewers would observe earthwork equipment, construction trailers, building construction, and cranes. No interim screening would be provided, and exposed soil would be reseeded within several months of construction completion.

Installation of Natural Gas Pipeline, Water and Sewer Pipelines and Electrical Transmission Lines

Temporary visual changes introduced by construction of the proposed water and sewer pipelines and electrical transmission lines would include vegetation clearing, trenching, and the activities associated with the placement of pipe sections or wooden transmission poles. Low-growing vegetation would be cleared during trenching operations. Where pipelines traverse agricultural land or pasture, seasonal crops or grasses would also be cleared within the ROW.

Along the proposed gas pipeline route, visual impacts are estimated to be low and not significant. Local travelers would observe pipeline construction at several locations, but the duration of impacts would be short and disturbances in or adjacent to highway or railroad ROWs are typical.

Residential viewers would be more adversely impacted than highway or local road travelers. Visual impacts would be comparatively low, however, because the disturbance would be temporary and many such activities occur in the transitional land use area characterized by a mixture of light industry, agriculture, and commercial activities. Additionally, some residences are already screened by vegetation and are oriented away from State Route 9 and adjacent ROWs.

Visual impacts associated with agricultural viewers are considered low. Agricultural workers in this area are accustomed to working adjacent to light industry and railroad spur accesses, which would be visually similar to pipeline construction activities.

The visual impacts to viewers along the electrical transmission routes from these construction activities are considered low because of the limited duration and widely spaced activities. Additional visual impacts may occur as a result of tree trimming associated with locating new or replacement poles adjacent to residential properties.

3.6.4.2 Operation

S2GF Site

When completed, the S2GF would be similar in appearance to the industrial character of the current SCCLP site. Heights of project components are presented on Table 3.6-2. The power turbines would be enclosed in buildings, and other ancillary elements would include fuel and liquid storage tanks, an electrical switchyard, cooling towers, and emission stacks. Project elements, except for the emission stacks, will be painted predominately earth tones. The emission stacks will be painted a light gray or similar color. During certain seasons or weather conditions, vapor plumes would be visible from the cooling towers. Because water is not used for cooling at colder temperatures, emissions from the stacks would not be visible when the temperature is below 25°F and would only be minimally visible at temperatures in the 30° range.

Table 3.6-2: Heights Of Project Components

Structure	Height (feet)
Turbine Building	55
Water Treatment Building	22
Tanks	46
Cooling Towers	40-46
Air Cooled Condenser	72
Emissions Stacks	150

A visual screen consisting of a mixed stand of mature trees, 20 to 30 feet high, will be planted in rows along the northern and southern property lines. To ensure adequate air circulation, no vegetation screening would be provided along the cooling tower cells. A grove of trees exists near the northwest corner of the site and will provide some screening of the electrical switchyard area. Close viewers may also observe a chain-link fence that will surround the site, with a lower story of shrubbery.

Once constructed, the S2GF is expected to introduce low to high visual impacts, depending on the viewer type and viewing distance. When the landscaping fully matures (beginning in approximately 10 years), the visual impact would be reduced to low to moderate. The facility would be visually compatible with the industrial development already existing in the area. The form, color, and scale of buildings would be similar to nearby industrial/warehouse development. Visual impacts from the S2GF at each representative viewpoint are summarized in Table 3.6-3.

Table 3.6-3: Summary of Visual Impacts from S2GF at Representative Viewpoints

Location Description	Visual Quality	Visual Sensitivity	Visual Impact
Residences along Kneuman Road and Moe's Hill	Rural	H	H/M/L
Residence along State Route 9	Rural	H	M/H/L
State Route 9 (Halverstick Road)	Rural	H	M
Barbo Road	Rural	M	M
Bob Mitchell Avenue and Residences on Locust and Pine Streets	Rural	M	M
IKO Pacific	Rural	L	L
Visual Sensitivity: H = high; M = moderate; L = low Visual Impact: H = high (potentially significant without mitigation) M = moderate (not significant) L = low (not significant)			

Residents in elevated homes on Moe's Hill (north of Kneuman Road) and those in homes located directly along Kneuman Road are considered sensitive viewers. The visual simulations shown along Kneuman Road (Figures 3.6-5 and 3.6-6) are 0.62 miles west of the western curb of Cherry Street. The photo was taken on the south side of the street, opposite utility poles # 3802 and #22846. The existing riparian vegetation and large trees will provide some degree of visual screening, but the scale of the facility, and elevated viewpoints would make the facility a visually dominant component of their view. Visual impacts would be most pronounced after construction and are considered high. As the landscaping vegetation matures, beginning in approximately 10 years, the visual impacts would be reduced to moderate and then to a low to moderate level.

Visual impacts at the Jagers Dairy Farm (residence south of State Route 9) are moderate to high. Valley vegetation and development would block most of the view of the facility. However, its presence would still be evident by the appearance of the emission stacks protruding above the treeline.



Source: Dames & Moore 3/1/00

Figure 3.6-5
View from Viewpoint 1 Without Landscaped Mitigation



Source: Dames & Moore 3/1/00

Figure 3.6-6
View From Viewpoint 1 With Landscaping

Visual impacts for travelers along State Route 9 are considered to be moderate. Views along many portions of the road are blocked by adjacent industrial facilities, but there are several locations where local travelers would have open views of the facility. In such instances, as the simulation from Route 9 depicts, the planting of mature trees will screen the majority of the facility from view (see Figures 3.6-7 and 3.6-8). The attention of eastbound travelers would be naturally drawn to the open fields, but the IKO Pacific facility and riparian vegetation growing along Sumas Creek would provide additional screening of the facility. The view experienced by highway travelers, who would pass very close to the site, would be dominated by the facility. Viewer sensitivity of highway travelers is considered somewhat less than residential viewers, but because Halverstick Road (State Route 9) is a frequently used local route, impacts are considered moderate.

The visual impacts for travelers using local routes like Barbo Road are estimated to be moderate. While the viewing distance is relatively far, this travel route is not directly oriented toward the facility. Valley vegetation and the IKO Pacific, Inc. facility will provide partial screening. Again, project components that may be noticed are the upper portion of the emission stacks and cooling towers extending slightly above the trees (to be planted). When fully mature, the existing vegetation and trees to be planted around the facility will screen all but these upper portions. In locations where the facility will be seen at a distance of one half mile or more, the view would be perceptually compatible with the light industrial/warehouse development already present.

Visual impacts to travelers along Bob Mitchell Avenue and to residences east of the street are considered to be moderate but not significant. The attention of travelers along this portion of the interstate would generally be directed forward because of vegetation and existing industrial development along the ROW. Residents in this area are already accustomed to views of the industrial warehouse and BN spur facilities along this stretch of road. In the few locations where penetrating views do exist, only the emission stacks and transmission lines traveling north toward the U.S./Canadian border would be visible.

Visual impacts of the S2GF on industrial and agricultural workers would be low. For industrial/warehouse workers, the facility would be a visual continuation of their immediate workplace environment. Agricultural workers in this area are accustomed to working adjacent to light industry and railroad spur accesses, which would be visually similar to project construction activities. Thus, attention to peripheral site development would be low and visual impacts associated with agricultural viewers would be low.

A representative viewpoint (Viewpoint 2) was selected for a visual simulation of the site that typifies viewing conditions. This viewpoint, just east of the State Route 9/Barbo Road intersection (along the eastbound shoulder of Route 9 at the intersection of the haul road access), is an eye-level view looking northeast of the S2GF site. This picture represents the anticipated view that residents and local travelers (moderate to high visual sensitivity) would experience when near the proposed facility after ten years of vegetation growth (Figure 3.6-8). From this vantage point, planted vegetation will provide screening of dominant foreground features, such as the cooling towers, emission stacks, and turbine buildings. Trees growing throughout the Nooksack River Valley will

screen the facility buildings and tanks from most vantage points, but the tall emission stacks rising above the treeline will be visible from more distant locations.

Natural Gas Pipeline

After construction, the public will be alerted to the presence of the natural gas pipeline with markings at regular intervals along its length. Because the pipeline will be buried deep enough to allow farmers to grow crops over the top of it, visibility will be low.

Water and Sewer Pipelines

The water and sewer pipelines, for the most part, will be placed in street ROWs, and will be buried underground. After construction, the pipelines will not be visible.

Electrical Transmission Lines

Visual impacts along the 230 kV U.S./Canadian transmission line route are considered low to moderate for viewers passing through the area, and high for the elevated properties to the west of the route. For the majority of area residents, local or business travelers, and workers moving through the area, views of the lines would be of short duration and primarily screened by trees and buildings along the route. Viewer attention (both active and passive) would likely be diverted from the lines by other activities and elements making up the rural/urban/industrial visual character of this portion of the City of Sumas. This would also likely be the case for the elevated view homes to the west of the route.

Existing visual impacts range from low to high along the 115 kV S2GF/Custer route. High impacts are associated with a scattering of residences where line structures are in close proximity. Where sight distances are greater, visual impacts of the transmission lines and structures are considered moderate. In locations where structures are hidden or blend well into the landscape, visual impacts are considered low.

The overall visual impacts along this route are considered not significant because most of the corridor would be overbuilt. Although the new structures would be larger, the rural character of the corridor would result in similar visual impacts at any particular viewing point. Residents in close proximity to the transmission lines would remain highly impacted, while forested areas would continue to partially mask the project in moderate and low impact areas. No significant cumulative impact is expected for Interstate 5 viewers since several transmission lines already exist at the crossing area proposed. The lines would be visible to recreational viewers at the Homestead Golf Course (junction of Depot Road and W. Badger Road), although overhead lines already exist in this area.



Source: Dames & Moore 3/1/00

Figure 3.6-7
View From Viewpoint 2 Without Landscape Mitigation



Source: Dames & Moore 3/1/00

Figure 3.6-8
View From Viewpoint 2 With Landscaping

In general, visual impacts at locations where existing lines will be raised (overbuilt) to handle the additional circuit are considered low to moderate. However, impacts to residents close to new pole sites where lines are moved across the street are considered moderate, while impacts from new lines where none exist are considered moderate to high.

Visual impacts along the 115 kV S2GF/Bellingham route would be similar to the S2GF/Custer route discussed above, with the following exceptions:

- ***Nooksack River Crossing.*** No lines are currently present at the proposed Nooksack River crossing. The new line would be visible for approximately 1,200 feet downstream and 1,500 feet upstream, and the impact is considered moderate to high. The impact is not considered significant because the lines would be masked by a forested background and transmission poles would be located far enough back from the river that they would not be especially visible, again due to the presence of existing large trees which would not be removed. The poles would be approximately 80 feet on the east side and approximately 85 feet on the west side of the river (see Figure 3.6-9).
- ***Agricultural Land.*** The north half of the corridor is predominantly flat and open agricultural land. Small utility lines extend throughout much of the area, but the larger structures associated with the project would be visible from greater distances. Thus, aesthetic impacts are considered moderate.

Transmission Line ROW Maintenance

Vegetation management of tall, dead, and dying trees is required along the 230 kV and 115 kV transmission lines to prevent damage to the lines from windthrow. Thus, trees would be managed within the ROW to prevent interference with the electrical lines. Within 25 feet of the power line, all mature trees 25 feet tall or greater would be removed (see Figures 3.4-5a and 3.4-5b). Trees less than 25 feet high may remain, and tree trimming is permitted in the wire and clearing zone if tree removal is not desired due to ownership, environmental, or cost considerations. In the buffer zone extending between 25 and 30 feet from the powerlines, structurally sound conifers (20 inches or greater in diameter) and deciduous trees (25 inches or greater in diameter) would be trimmed. Trees less than the specified diameter would be removed. In areas further than 30 feet from the lines, maintenance would include the removal of dead, dying, and unstable trees.

Trimmed material and tree trunks are typically left on the ground in naturally vegetated areas to enhance habitat. The two 115 kV routes in Whatcom County would use existing transmission routes, with the exception of approximately 4 miles. The transmission lines over the Nooksack River are to be placed in a manner that will avoid the removal of the existing large trees, although the powerline pole placed on the north bank of the Nooksack River would likely require the removal of a few mature trees.

Approximately 90 percent of the route will be overbuilt onto existing lines where tree maintenance already occurs. In those areas, tree maintenance would not differ from existing practices.

3.6.5 Environmental Impacts of No Action

Because existing visual conditions would not be altered at the S2GF site or along the electrical transmission and pipeline routes, visual resources would not be impacted as a result of the No Action Alternative.

3.6.6 Mitigation Measures

3.6.6.1 Construction

No mitigation measures with respect to visual resources are required during construction.

3.6.6.2 Operation

Under the proposed plant design, the facility and emission stacks would be painted in earth tones to lessen the contrast with existing visual resources. Landscaping would also be completed along the perimeter of the site and parking areas including the planting of mature trees. To reduce impacts to the nearest residences (located to the northwest of the S2GF site) the following steps will be taken:

- Existing trees will remain on the perimeter of the site, serving as landscape buffers to increase S2GF's visual compatibility with the surrounding area.
- SE2 will plant large native specimen trees up to 25 feet tall to help screen the view of the plant site. These plantings will include fast-growing trees, such as poplars, to expedite the development of a mature vegetative screen.
- The northern property line will initially be planted with large native trees to create a 30-foot-wide buffer. When mature, these trees will help screen the view from residences to the north of the site. Some of these trees, such as lombardy poplars, will reach full maturity in less than ten years.
- SE2 will provide additional screening by planting low trees, shrubs, and vines at recommended intervals around the perimeter of the galvanized chain link fence.
- SE2 will construct screening walls around ancillary elements. Wall treatments could include aesthetic material/texture patterns and vines.



Source: Dames & Moore
3/1/00

Figure 3.6-9
Simulated View of Nooksack River Crossing with Transmission Line

3.6.7 Cumulative Impacts

Developing an electrical generation plant on the proposed site would cumulatively contribute to the visual conversion of this area from agricultural land to industrial development. The site is positioned among other industrial facilities, as it is located across Route 9 from a lumber company and the SCCLP power plant, and nestled between an asphalt shingle mill and a rail/trucking facility. However, because this land is currently used for agricultural purposes, nearby residential viewers may feel that this project continues to transform the rural agricultural views from their homes to one that is considered more intensely developed industrially. The proposed S2GF screening and mitigation measures, together with continuing this practice for future developments, should result in moderate cumulative view impacts, which should gradually diminish to lower levels once surrounding vegetation has matured.

Because the pipelines would be sited in existing utility corridors, the cumulative impact on visual quality along the routes is considered low.

The cumulative visual impacts associated with the transmission lines are expected to be low in those areas where transmission lines currently exist, and moderate to high in areas where they do not.

3.6.8 Significant Unavoidable Adverse Impacts

With the vegetation mitigation proposed, no significant unavoidable adverse impacts to visual resources are anticipated.